Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

Title V Draft No. V-99-025
DANA CORPORATION, PERFECT CIRCLE DIVISION
FRANKLIN, KY
May 5, 2000
REBECCA T. CASH, REVIEWER
Plant I.D. # 105-3740-0009
Application Log # F897

SOURCE DESCRIPTION:

Dana Corporation, formerly known as Sealed Power, is currently authorized to operate by O-87-030 (Revision 3). A skeleton application, which met Title V requirements, was received on December 11, 1996 and was determined to be a comprehensive application on December 9, 1998. The application was deemed complete on January 26, 1999. Additional information was requested on March 24, 1999 and received on April 12, 1999.

The facility manufactures iron piston rings. The facility forms the rings in a machining area using lathes, grinders, lappers, and other machining equipment. The emissions from the machining operations are controlled by a baghouse. The rings are then stored until plating is performed. The rings may have a layer of iron oxide formed on the outside surface. This layer is removed with a rust strip process. A Granoseal layer is then applied to the outside diameter of the rings. The rings are then run through a degreaser to remove oil and dirt from the outside of the rings. The rings are plated at either the tinplate line or the seal plate line. The tin plating consists of plating pure tin on iron substrate through a series of tanks. The seal plating consists of plating a mixture of tin and nickel on iron substrate through a series of tanks. After plating, excess moisture is removed from the rings in a drying oven.

A modification to the seal plate line was proposed in order to automate the line. The modification will improve the efficiency and reduce chemical drag-out. A new ventilation system will also be installed for the line and the line emissions will exit via an emission stack through the roof. The modification will cause insignificant increases to the line's emissions.

COMMENTS:

The following regulations were reviewed for applicability to the facility:

401 KAR 59:010, New process operations

All machining, welding, and dipping tank operations shall comply with the particulate emission limitations and the opacity limit of this regulation.

401 KAR 59:015, New indirect heat exchangers

The boiler emissions from the facility qualify as an insignificant activity, however, all emission limitations from this regulation still apply.

401 KAR 59:185, New solvent metal cleaning equipment

This regulation does not apply to the open-top vapor degreasers, since the facility is located in an area classified as attainment.

Comment (continued):

401 KAR 61:095, Existing solvent metal cleaning equipment
This regulation does not apply to the open-top vapor degreasers, since the facility is located in an area classified as attainment.

401 KAR 63:021, Existing sources emitting toxic air pollutants
This regulation was applied to the following pollutants in the facility's previous operating permit: sodium hydroxide, phosphoric acid, manganese, tin, nickel, and 1,1,1 trichloroethane. The calculated emissions for sodium hydroxide, phosphoric acid, manganese, tin, and nickel were found to be below their adjusted significant level. The facility uses trichloroethylene in place of the 1,1,1 trichloroethane. This regulation no longer has applicability to the facility. All toxic emission limitations have been removed from the permit.

401 KAR 63:460, National emission standards for halogenated solvent cleaning
This regulation applies to the facility's two open-top vapor degreasers. The facility has placed the following controls on the degreasers in order to meet the requirements from the regulation: working mode cover, refrigeration device, freeboard ratio of 1.0, and a hoist speed of 7 feet per minute.

Emission factors for the source were from AP-42, MSDS sheets, and the *Industrial Ventilation Handbook*.

EMISSION AND OPERATING CAPS DESCRIPTION:

The open-top vapor degreasers have operating limitations from the applicable NESHAP. The limitations consist of the maximum hoist speed, the operating temperature of the refrigeration device, the maximum freeboard ratio, and the operating conditions of the working mode cover.

OPERATIONAL FLEXIBILITY:

There is no flexibility in the operation of the controls for the two open-top vapor degreasers unless the facility has obtained approval from the Division.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.

PERIODIC MONITORING:

For emission points 01-05 and 09-22 the permittee shall monitor the following:

a) To provide reasonable assurance that the visible emission limitations are being met the permittee shall:

i) Perform a quarterly opacity reading, or more frequent if requested by the Division, from each stack or vent using Reference Method 9. Opacity readings shall be conducted while the emission units are in operation

ii) Perform a daily qualitative visual observation of the opacity of emissions from each stack/vent and maintain a log of the observation. The log shall note:

1) Whether any air emissions (except for water vapor) were visible from the vent/stack,

2) All emission points from which visible emissions occurred, and

3) Whether the visible emissions were normal for the process.

iii) Determine the opacity of emissions by Reference Method 9 if visible emissions from any stack/vent is perceived or believed to exceed the applicable standard. To provide reasonable assurance that the particulate matter emission limitations (TSP and PM_{10}) are being met, the permittee shall monitor the amount and type of process weight added to each particulate matter emissions unit. The 3-hour average process weight rate shall be determined by dividing the total tons added to the emission point each month by the hours of operation for the corresponding month. Average particulate emissions shall be calculated as follows:

$$PE = (PW \times PEF)$$

Where PE = Particulate emissions in lbs./hr, PW = process weight in tons/hr, and PEF = particulate emission factor in lbs./ton of process weight.

Throughput limits shall be monitored to ensure compliance with the emission limitations calculated above.